tunnel, and an eight-unit underground powerhouse with 850 MW capacity. He was responsible for ensuring that projects met customer expectations and had the necessary resources.

Manager of Construction, Bechtel Australia Pty, Ltd

2007–2009: Mike was responsible for oversight of global construction activities for Bechtel's Mining and Metals Global Business Unit. Specific duties included field non-manual staffing, industrial/employee relations, craft hiring and staffing, developing and promoting standardized construction work processes, training, and employee development.

Manager of Construction, Hanford Waste Treatment and Immobilization Plant (WTP) Nuclear Project

2005–2007: Mike was responsible for managing the construction portion of this $12.2 billion facility to process and stabilize 53 million gallons of nuclear and chemical waste. The construction site encompasses 64 acres and includes four major nuclear facilities, the largest of which, the Pretreatment Facility, has a footprint equivalent to four football fields (about 753,000 ft^2) and will be 12 stories tall when completed. Mike was also responsible for relationship management with the Union Building Trades performing work to NQA-1 standards.

Project Manager, Pueblo Chemical Agent-Destruction Pilot Plant

2002–2005: As the Project Manager, Mike was responsible for providing overall leadership and strategic planning/guidance to the customer and the project team on this $1.2 billion EPCC plant to neutralize and biodegrade 2,535 tons of mustard agent stored at the Pueblo Army Depot in Colorado. He led a diverse integrated team that included Washington Group, Parsons, and Battelle.

Project Operations Manager, Bechtel National, Inc. Defense and Space Projects

2001–2002: Mike provided support and oversight for business sector project managers; developed customer relationships; and implemented feedback systems to monitor project performance and customer satisfaction.

Project Manager, Anniston Chemical Agent Disposal Facility

1998–2001: Mike was responsible for overall financial and technical performance and execution of engineering, procurement, construction, and testing of this $314 million fixed-price grassroots plant designed and constructed to dispose of chemical weapons stored at the Anniston Army Depot in eastern Alabama.

Manager of Construction, Nevada Test Site

1995–1998: Mike managed a large workforce performing underground and aboveground construction work, environmental remediation, facilities modifications, and new facilities construction at this 1,375 square mile National Nuclear Security Administration facility that includes over 1,100 buildings, 398 miles of paved roads, and 200 miles of unpaved roads.

Construction Manager, Nuclear Weapons Storage and Security Systems Project

1995: Mike managed construction on this 10-year, $206 million program to install 16 weapon vault systems at 15 NATO bases in 7 countries.

Construction Manager/Project Field Engineer/Contract Administrator, Cowlitz Falls Hydroelectric Project

1991–1995: As the Project Manager during the operations and maintenance phases of this $50 million contract, Mike directed construction and operation of a 70 MW dam and powerhouse in west-central Washington State.

Project Manager/Plant Manager/Field Engineer, New Martinsville Hydroelectric Plant

1986–1990: Mike supervised the operations and maintenance of this 34 MW low head run-of-river bulb turbine hydroelectric plant attached to the U.S. Army Corps of Engineers Hannibal Lock and Dam on the Ohio River in West Virginia.

Field Engineer/Plant Engineer, Bechtel

1976–1985: Mike learned his skills while working on numerous nuclear, government, and mining projects.

INFRASTRUCTURE
MINING & METALS
NUCLEAR, SECURITY & ENVIRONMENTAL
OIL, GAS & CHEMICALS

Michael S. Robinson

Project Management and Construction

Education

- BS, Mechanical Engineering, Brown University
- Graduate Studies, Environmental Engineering, Penn State University

Mike Robinson has more than 23 years of experience in project and construction management, business development, and proposal development and estimating. His expertise encompasses management of projects and teams with a range of technologies, and contract structures with focus on operating facilities. He was elected a Bechtel Principal Vice President in 2013.

Project Manager

2015–Present: Currently, Mike supports the Nuclear, Security and Environmental Business assisting owners on ongoing projects and developing new opportunities.

Project Manager, Panda Temple II Combined Cycle Project

2013–2014: Mike served as the consortium lead and had overall EPC execution responsibility for Bechtel on a lump sum 2x2x1 combined-cycle project located on a greenfield site in Texas. After taking over the project at approximately 50 percent complete, he oversaw the completion of engineering design, globally sourced equipment and material delivery, construction, and commissioning. The project was completed and turned over to the customer 2 weeks ahead of schedule with plant performance better than guarantee. The project staff peaked at over 1,000 craft, subcontractors, and non-manuals who worked more than 2.5 million job-hours without a lost-time accident (LTA). Mike also served as project manager for Temple II CC project, a replicate plant adjacent to the Temple project, during the first 8 months of execution before focusing solely on the commissioning and completion of the Temple project.

Project Manager, Turkey Point Extended Power Uprate (EPU) Project

2012–2013: Mike was responsible for managing key execution activities on a complex uprate project at an operating two-unit nuclear facility in southern Florida that included two of the largest planned uprate outages in U.S. nuclear history. He took over as the project manager immediately before the U3R26 outage, which experienced a 30 percent increase in jobhours after breaker open because of design evolution and emergent conditions. He focused on implementing lessons learned and other improvements during an abbreviated period between outages. This led to significant improvements in cost and schedule execution for the final U4R27 outage. Bechtel completed the critical path work 1 week ahead of schedule and finished 8 percent under the scope-adjusted pre-outage budget. The project's first-time quality and execution performance earned special recognition from the customer. Bechtel's portion of the project was approximately $900 million and was staffed with upwards of 400 non-manuals and 1,600 craft and subcontractors onsite during the outages. The project worked over 7 million jobhours without an LTA; was recognized as *Power Magazine*'s 2013 Project of the Year–Best Nuclear Project; and earned Bechtel's 2013 Project Management Excellence Award.

Site Manager, Point Beach EPU Project

2009–2011: Mike managed the field execution of the Point Beach EPU project in Wisconsin, Bechtel's first large-scale EPU project in the construction phase. Principal duties included managing construction personnel staffing, coordinating craft resources and labor relations, implementing the Bechtel safety and quality programs, and interfacing with senior customer personnel. The project worked over 1 million jobhours without an LTA or OSHA recordable injury.

Executive Assistant

2008–2009: Mike assisted the president of Bechtel Power on commercial, execution, and personnel issues by developing draft policies, presentations, and executive letters. He also supported estimate reviews, project execution reviews, and corporate and business line policy discussions.

Business Development Manager

2006–2008: Mike managed the development of fossil power projects, including proposals, with emphasis on solid fuel and emissions retrofit projects. He negotiated services agreements and engineering, procurement, and construction (EPC) contracts. Bechtel was initially awarded two large projects (a $1 billion greenfield coal plant and a $1 billion multi-project site air quality control upgrade program) that Mike supported before they were cancelled because of changes in market conditions.

Startup Engineer, Springerville Expansion Project

2005–2006: Mike undertook a rotational assignment as a startup engineer on a lump-sum, 400 MW, pulverized coal-fired project in Arizona. He was responsible for commissioning the AQCS systems.

Project Estimating/Proposal Development Manager

2002–2005: As an Estimating Manager, Mike coordinated estimating activities for power projects worldwide. He represented the Estimating department during customer discussions and internal management reviews. He developed budgets and schedules for estimates and proposals under his sponsorship; prepared, reviewed, and presented lump sum, indicative, and order of magnitude estimates as necessary to support the Power business line; and supervised and trained new project estimators. As a proposal development manager, he worked with the Business Development department to define proposal strategies. He coordinated and managed engineering, procurement, construction, contracts, and estimating activities during the proposal process and reviewed proposal documents, including scope books, schedules, and contracts.

Estimating Supervisor, Project Mechanical Estimator

1997–2002: As a supervisor, Mike supervised Power's Mechanical Estimating group and coordinated estimating efforts in the Asia-Pacific region and for solid fuel projects worldwide. He assigned work tasks, monitored progress with respect to quality, oversaw schedule and budget compliance, and reviewed completed work products. He represented the group and the Estimating department during planning meetings, management reviews, and open book reviews with customers. As an estimator, Mike was responsible for the preparation of lump-sum grassroots construction, modification, and demolition of fossil and nuclear power plants world-wide.

Construction/Resident Engineer – Various Refineries

1994–1997: During this period, Mike was assigned to three refineries and performed a variety of activities. At the Sun Oil Girard Point Refinery, he developed work scopes and provided detailed engineering for capital projects, determined mechanical equipment specifications, ordered materials, and qualified vendor bids. He also supported cost estimate development and monitored project installation to ensure technical and budget compliance. For the BP Oil Refinery, he developed a pressure vessel inspection program using specifications provided by the customer to bring the refinery into compliance with OSHA 1910. He supervised the daily activities of the group during implementation, tracked project scheduling, and interfaced with customer supervision. He performed walkdowns of process piping to support the Chevron USA Refinery reliability program, determined as-built configuration of piping systems, and calculated inspection points for affected systems.

Superintendent/Field Engineer – Various Commercial Nuclear Facilities

1991–1993: At the Hope Creek/Salem nuclear plants, Mike supervised the installation of an environmental spill containment for the emergency gas turbine unit. He also managed pipefitters during two service water piping replacement projects.

From June to November 1992, Mike supervised the installation of piping and instrumentation at Turkey Point Nuclear Plant. He interfaced with customer engineering to resolve constructability concerns, testing piping systems, and assisted in the recovery efforts following Hurricane Andrew.

From October 1991 to June 1992, Mike reviewed and completed pipe, hanger, and mechanical equipment design change packages for the Comanche Peak Generating Station.

In an earlier assignment at Turkey Point from June to September 1991, he monitored the installation of pipe, hangers, and instrumentation tubing. He also tested pipe and instrument lines and turned over assigned systems to Startup.

INFRASTRUCTURE
MINING & METALS
NUCLEAR, SECURITY & ENVIRONMENTAL
OIL, GAS & CHEMICALS

Ronald L. Beck

Project Management and Engineering

Ron Beck has spent his entire career in the nuclear power industry. He has a strong civil engineering background and many years of design engineering and field experience, with a solid foundation in the details of work planning and execution. He was project manager for three steam generator replacement (SGR) projects, assistant project manager for one SGR project, and shift outage manager for two reactor vessel head replacement (RVHR) projects. His background also includes civil design work on Grand Gulf, South Texas Project, and Watts Bar. He is a highly dedicated leader with strong technical skills, effective management capabilities, and the ability to motivate teams to successful outcomes.

Technical Qualifications

- Over 40 years of nuclear experience, including 17 in design engineering and licensing, 18 on SGR and RVHR projects, and 5 in next-generation nuclear (EPR, SMR) project management
- Registered Professional Engineer in Maryland (retired); inactive in Mississippi, South Carolina, Tennessee, Texas, and Virginia
- Member of ASCE
- Author of several published technical papers (available on request)

Education

- ME, Civil Engineering, Virginia Polytechnic Institute (Structural Engineering Major)
- BS, Civil Engineering, Virginia Polytechnic Institute
- Bechtel Certification, Project Manager Level II

Project Manager

2010–Present: For the Generation mPower small modular reactor (SMR) project, Mr. Beck has been responsible for all aspects of Bechtel's scope and project execution and for interface with Generation mPower LLC and Babcock & Wilcox (B&W), as well as potential customers, Industry Advisory Council members, management committee members, and regulatory agencies. His responsibilities include overall management of 230+ professionals, including engineering, licensing, project cost and schedule, procurement and contract functions.

Mr. Beck also managed the Bechtel engineering team and the integration of Bechtel's scope with B&W's Nuclear Island scope and participated in a due diligence assessment as project manager, civil/structural reviewer, construction reviewer, and overall report preparer. The report outlined the results of the assessment regarding investing in a specific new generation nuclear technology.

2008–2010: Mr. Beck was the responsible project manager for the Bell Bend US EPR nuclear power plant project. He supported AREVA's preparation of responses to the NRC's requests for additional information in conjunction with the design certification process; managed an optimization study; participated in construction schedule development; worked with PPL on updating the site utilities plot plan for its Combined License application; and oversaw the development of budgets, schedules, and reports.

2008: Mr. Beck oversaw the development of the long-range strategic plan for the SONGS SGR project. The work involved developing the preoutage schedule encompassing Bechtel's work from 2008 through 2010 and the Cycle 15 and Cycle 16 (SGR) outage schedules for Bechtel's work and integrating these schedules into the client's online and outage work schedules.

2007: Mr. Beck assisted in developing the long-range construction plan for completing the Watts Bar Nuclear Station Unit 2 reactor building structures, systems, and components as part of the restart project.

2007: For the Palo Verde Nuclear Generating Station Unit 1 SGR project, Mr. Beck managed all aspects of removing and relocating the V651 valve in the reactor coolant system ASME Class 1 shutdown cooling line to support long-term plant operability and reliability.

2006–2007: As plan coordinator for the SONGS SGR project, Mr. Beck managed the development and submittal to the client of 50-plus management, engineering, and construction plans and 30-plus specific contract deliverables describing the methods and approaches Bechtel would employ to

execute its SGR work scope. He also supported the project manager on project commercial and technical issues.

2005: For the Palo Verde Unit 3 SGR project, Mr. Beck managed the installation of a vortex elimination plate in the reactor coolant system ASME Class 1 shutdown cooling line. The plate was later removed as a result of system testing.

2004–2005: Mr. Beck managed or supported proposals for the Turkey Point Units 3 and 4 and St. Lucie Units 1 and 2 RVHR projects; the Crystal River Unit 3 SGR project; the Bruce A Units 1, 2, 3, and 4 SGR projects; the Diablo Canyon Units 1 and 2 SGR projects; the SONGS Units 3 and 4 SGR projects; the SONGS Units 2 and 3 and Palo Verde Units 1, 2, and 3 RVHR studies; and the Palisades RVHR project.

Shift Outage Manager

2003: For the Surry Power Station Units 1 and 2 RVHR project, Mr. Beck interfaced with client, subcontractor, and Bechtel personnel to develop the schedule; attended client/Bechtel plan-of-the-day meetings; interfaced with client and Bechtel personnel on day-to-day operations, including action item meetings and task reviews; and managed Bechtel's day shift containment work during each unit's replacement outages.

Project Manager

2002: Mr. Beck managed several SGR project proposals, an RVHR project study for two nuclear units, and an independent third-party SGR project cost estimate study review for a nuclear utility.

2000–2001: For the Shearon Harris SGR project, Mr. Beck directed all aspects of engineering, construction, procurement, quality, cost, and schedule; coordinated interfaces with the client and subcontractors; and interfaced with Bechtel senior management, global and regional industry unit and execution unit management, and home office functional departments.

1996–2000: For the South Texas Unit 1 SGR project, Mr. Beck had the same duties as for the Harris project.

1995–1996: Mr. Beck developed generic SGR project core team operations and was a member of the team that developed a Bechtel/Westinghouse teaming agreement for SGR projects. He also developed competitively bid SGR projects and sole-source negotiated SGR awards, including the first South Texas Unit 1 SGR involving the Bechtel/Westinghouse agreement.

1992–1994: For the Virgil C. Summer SGR project, Mr. Beck had the same duties as for the Harris project. He also planned and mobilized direct-hire and field subcontracts; interfaced with the client for design, procurement, and field activities; developed and negotiated subcontracts; directly participated in onsite work activities during outage and nonoutage periods; and was directly involved in quality assurance activities.

1991–1992: For the ASCO Units 1 and 2 SGR project, Mr. Beck managed photogrammetry and interference walkdowns, the redesign of the biological shield wall, preparation of the technical specification, and technical evaluation of replacement steam generator fabrication proposals. He also managed SGR studies for St. Lucie Unit 1 and for Mitsubishi Heavy Industries, Ltd. in Japan.

Assistant Project Manager

1989–1991: For the Palisades SGR project, Mr. Beck provided management overview of the engineering team and management support to the cost and schedule supervisor for schedule and budget control. He assisted in coordinating Bechtel's client interface on licensing and other high priority issues and coordinated the development of the SGR outage schedule with the SGR project team (management, engineering, construction, procurement, subcontractors, and client). As night shift outage coordinator during the replacement outage, he coordinated Bechtel's night shift construction activities with the client and the client's contractors. During job closeout, he assisted the project manager and field services manager with closeout activities, including engineering as-built package completion, contract compliance closeout, outage work activity completion, and licensing and quality assurance review closeout.

Project Engineer/Project Engineering Manager

1985–1989: For the South Texas Units 1 and 2 project, Mr. Beck supported the civil/ structural, pipe stress and pipe support, architectural, and plant design layout disciplines. He directly interfaced with the client in completing engineering design, licensing, and engineering assurance activities associated with these disciplines. He also assisted in managing the contractual and legal aspects of

the project's main cooling reservoir; coordinated interfaces with the project's constructor and client and Bechtel management; and directed the coordination of engineering activities associated with Unit 1 hot functional testing, including development of engineering hot functional test procedures for thermal and vibration monitoring.

Design Engineer/Group Leader/Engineering Supervisor

1972–1985: Mr. Beck was assigned to the Grand Gulf Nuclear Station Units 1 and 2 project. Initially, he developed various preliminary design studies subsequently used for input to the Preliminary Safety Analysis Report and to project cost and final design studies. He reviewed cooling tower structural design calculations, wrote and administered a subcontract for cooling tower foundation piling installation, and wrote piping technical specifications. Later he supported various site engineering tasks and completion of final ultimate heat sink basin structural designs and assisted in managing group design activities. Subsequently, he led the design activities associated with the reactor containment building (RCB) and site and managed a specialized task force performing dynamic loading analysis of the BWR Mark III RCB. He supervised development of the Final Safety Analysis Report sections associated with the RCB and other Seismic Category I site facilities. He participated in regulatory hearings with the NRC and the Advisory Committee on Reactor Safeguards in conjunction with the RCB dynamic analyses and assisting in supervising civil/ structural design activities. Ultimately, he was responsible for all civil/structural engineering design activities associated with Unit 2.